

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Examiner: Ma, Johnny

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Commissioner for Patents
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APPEAL BRIEF

Sir:

This Brief is submitted in support of this appeal from a Notification of Non-Compliant Appeal Brief, mailed September 25, 2006, and from a final decision of the Examiner, mailed March 13, 2006. Consideration of this appeal by the Board of Patent Appeals and Interferences for allowance of the above-captioned patent application is respectfully requested.

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I. REAL PARTY IN INTEREST

The real party in interest is BigBand Networks, Inc., a corporation of Delaware having a place of business at 475 Broadway, Redwood City, CA 94063.

II. RELATED APPEALS AND INTERFERENCES

This application was previously the subject of an appeal (Notice of Appeal filed Oct. 14, 2003), which was dismissed prior to decision as a result of issuance of an Office Action dated March 29, 2004.

III. STATUS OF CLAIMS

Claims 1, 4, 6 and 9-22 have been cancelled. Claims 2, 3, 5, 7, 8 and 23-39 are currently pending, have been finally rejected and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

There are no currently pending amendments.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Claim 23 reads as follows:¹

A method, comprising:

periodically downloading (402, 404) from a server (102) selected data sets according to user profile information, the selected data sets representing information elements for display to a user during switching events (406);

displaying (408) a first one of the information elements in response to initiation of a first switching event (406), the first switching event being characterized by unavailability of information from the server for display; and

discontinuing the display of the first one of the information elements and displaying the data stream information from the server when it becomes available for such display (418), unless the user has initiated an interactive transaction session (410) with a remote host by selecting an interactive element associated with the first one of the information elements in which case displaying the data stream information from the server is delayed (412) until termination of the interactive transaction session or expiration of a predetermined period of inactivity by the user (416).

¹ Reference numbers as used in the drawings have been inserted in accordance with 37 C.F.R. § 41.37(c)(1)(v). The use of such reference numbers should in no way be read as limiting the claim to the illustrated embodiment.

As indicated by this claim, the present invention relates to methods for displaying information to a viewer during so-called “zap times” (i.e., times between channel changes during which information from the server is unavailable for display). The information so displayed during these “zap times” can include, for example, advertising information; information about the next/target program or channel selected; a window showing a segment of the target program that is transmitted over the target channel; personal information associated with the viewer (e.g., notification that one or more electronic mail messages have arrived, stock prices of securities in the viewer’s portfolio, etc.) , etc.

The information to be displayed during a zap time is selected based on the viewer’s profile (e.g., recipes for cooking enthusiasts, news clips from preferred sources, advertisements of particular interest, etc.) and stored in a set top box. In response to a channel change, the zap page is displayed until the new channel information is ready for display.

In some cases a zap page includes interactive elements that allow the viewer to request additional data. When such interactive elements are involved and the user initiates an interactive session by selecting such an element, the regular channel information is not displayed until that session is complete or times out. Specification at p. 2, ll. 5-21; p. 3, ll. 2-13 and 15-22.

Claim 31 reads as follows:

A system, comprising:
a server (102) configured to provide a data stream transmission; and
a digital set top box (106) configured to (i) periodically download from the server (102) selected data sets according to user profile information, the selected data sets being included within the data stream and representing information elements for display to a user (110) during switching events; (ii) display a first one of the information elements in response to initiation of a first switching event, the first switching event being characterized by unavailability of information from the server (102) for display; and (iii) discontinue the display of the first one of the information elements and displaying the data stream information from the server (102) when it becomes available for such display, unless the user (110) has initiated an interactive transaction session with a remote host by selecting an interactive element associated with the first one of the information elements in which case displaying the data stream information from the server (102) is delayed until termination of the interactive transaction session or expiration of a predetermined period of inactivity by the user (110).

As indicated by this claim, the present invention relates to systems for displaying information to a viewer during so-called “zap times”. Generally, the elements supporting the operation of the invention include a server, a data source, a network, a receiver, a display device, an input device and a viewer of the display device.

The information to be displayed during a zap time is selected and downloaded from the server based on the viewer’s profile (e.g., recipes for cooking enthusiasts, news clips from preferred sources,

advertisements of particular interest, etc.) and stored in a set top box. In response to a channel change, the zap page is displayed until the new channel information is ready for display.

In some cases a zap page includes interactive elements that allow the viewer to request additional data. When such interactive elements are involved and the user initiates an interactive session by selecting such an element, the regular channel information is not displayed until that session is complete or times out. Specification at p. 7, ll. 10-17; p. 8, ll. 3-7.

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 23, 2, 3, 7, 8, 24-27, 29-31 and 34-39 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Grossman et al. (US 5,907,321) in view of Tsuria (US 5,786,845), Picco et al. (US 6,029,045), and Howe et al. (US 5,892,508).

Claims 5, 32, and 33 stand rejected under 35 USC 103(a) as allegedly being unpatentable over Grossman in view of Tsuria, Picco, Howe and Nathan et al. (US 6,182,126).

Claim 28 stands rejected under 35 USC 103(a) as allegedly being unpatentable over Grossman in view of Tsuria, Picco, Howe and Kitsukawa et al. (US 6,282,713).

VII. ARGUMENT

A. The combination of Grossman and Tsuria does not yield the present invention.

The Office Action concedes that the combination of Grossman and Tsuria is insufficient to obviate the present invention.

Grossman is directed to a scheme for enabling a cable subscriber to allow the display of advertisements during an interchannel interval (ICI). Tsuria is directed to an interval message provider operative to display predetermined information messages during channel change events. Nevertheless, the combination of these references would fail to teach or suggest downloading selected data sets according to user profile information and/or an interactive session in which case the display of data stream information is delayed until termination of the interactive transaction session or expiration of a predetermined period of inactivity by a user as recited in claims 23 and 31. Hence, claims 23 and 31, and their respective dependent claims are patentable over this combination of references.

B. There is no suggestion or motivation to combine Picco, directed at permitting a broadcaster to deliver localized content to be inserted into the programming data, with Grossman and/or Tsuria, each directed at schemes for displaying information during channel changing intervals.

Because neither Grossman nor Tsuria disclose the downloading of selected data sets according to user profile information, the Office Action suggests the combination of these references with Picco. However, Picco is directed at a problem that is wholly unrelated to that discussed by Grossman and Tsuria. Indeed, the problem addressed by Picco and the problem addressed by Grossman/Tsuria are manifested during mutually exclusive circumstances. Picco allows individualized local content to be inserted into the programming data stream (Picco, Abstract; 3: 43-62; 6: 20-23, 38-40), i.e., while a user is viewing a selected channel. In contrast, Grossman/Tsuria disclose the display of visual images when a user changes the channels, during a delay between the displays of sequentially displayed channels (Grossman 3: 41-55; Tsuria, 3: 66 - 4:4).

Thus, the problems addressed by Grossman/Tsuria and Picco are distinct and unrelated. Indeed, if anything a combination of these references suggests that if one wishes to address the provision of content based on viewer profile information such content should be provided with the broadcast stream (as discussed by Pico) and not during channel change events, when other forms of content should be provided (as described by Grossman and Tsuria). Stated simply, there is no suggestion or motivation to combine the references in the manner contemplated by the Office Action that can be found in the references themselves.

To establish a prima facie case of obviousness, three basic criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. As demonstrated above, the references themselves do not provide the requisite motivation and the suggestion in the Office Action concerning the rationale advanced by Pico for presenting content based on lower costs applies to broadcast stream content not inter-channel change content as in the present invention. Moreover, this suggestion is more the recitation of a purported *purpose* for the combination, NOT a motivation for same. Such a purpose is suggested solely by hindsight in view of the present method/system in which data sets are downloaded according to user profile information. Accordingly, the present rejections are improper and should be reversed. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991) (holding that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure).

C. There is no suggestion or motivation to combine Howe, directed at interactive sessions relating to the content of television broadcasts, with Grossman/Tsuria directed at displaying visual images in response to a channel change.

Howe is cited for teaching an interactive transaction session. The Office Action suggests that because Grossman describes advertisements with certain header information and Howe describes providing advertisements as part of an interactive session it would have been obvious to combine the teachings of the references. This argument ignores the fact that the references themselves are directed to unrelated problems.

Grossman is concerned with the display of information during times other than when a television picture is being displayed, i.e., during the delay period between the displays of sequentially displayed channels (Grossman, 3: 46-55). There is no indication in Grossman that the information displayed when the user changes channels is in any way dependent on or related to the content of the television picture.

Howe, on the other hand, is concerned with initiating interactive sessions based on the content of a current television broadcast (Howe, 12: 30 et seq.). In other words, Howe provides a solution for times other than those which Grossman is concerned with. The two references deal with mutually exclusive events.

Thus, one of ordinary skill in the art would not have been motivated to make the combination suggested by the Office Action because the references themselves do not suggest such a combination and the problems being addressed therein are not at all similar. For these reasons, the combination of Grossman and Howe references is not supported and the present rejections should be removed.

D. The rejection of claims 5, 32, and 33 is erroneous, because there is no suggestion or motivation to combine Nathan, directed at recording and reproduction of audiovisual information, with Grossman/Tsuria directed at displaying visual images in response to a channel change.

Although Nathan is cited for teaching the storing of one data set in a buffer and another data set in a memory, wherein the data set in the buffer is replaced by the one in memory after the first data set in the buffer is transmitted for display, a combination of Nathan and Grossman does not satisfy the *Graham* factual inquiry (MPEP 2141), as there is no suggestion or motivation to combine the references (see also MPEP 2143.01).

Specifically, Nathan's disclosure relates to home digital audiovisual information recording and reproduction apparatus (Nathan 1:29-30), which allows the user to select and purchase a musical piece (Nathan: 12: 8-19). Thus, Nathan's disclosure is unrelated to concerns such as utilizing the zap time, a problem specific to the field of cable television systems. Grossman/Tsuria, on the other hand, address displaying visual images in response to the determination of a channel change (see, e.g., Grossman 4: 55-61), and are not concerned with enabling a user to acquire and reproduce audiovisual data selections using

a television screen and a stereo system. Thus, one of ordinary skill in the art would not have been motivated to make the combination suggested by the examiner because the references themselves do not suggest such a combination and the problems being addressed therein are distinct.

The motivation to combine Grossman/Tsuria and Nathan is suggested solely by hindsight in view of the presently claimed invention, hence, the combination of references is improper.

E. Claim 28 is Patentable over the combination of Grossman, Picco, Kitsukawa, and Tsuria.

Kitsukawa is cited for teaching an interactive transaction system using the Internet. However, it is questionable whether one of ordinary skill in the art would have realized that such use of information elements with interactive elements could have been adapted for use in the system taught by Grossman.

Grossman is concerned with the display of information during times other than when a television picture is being displayed, i.e., during the delay period between the displays of sequentially displayed channels (Grossman et al. 3: 46-55). There is no indication in Grossman that the information displayed when the user changes channels is in any way dependent on or related to the content of the television picture.

Kitsukawa, on the other hand, is concerned with displaying information superimposed on a television picture (Kitsukawa et al. 10:43-50). Stated differently, Kitsukawa is concerned with displaying information directly related to the content of the television picture, i.e., providing coupon information for products and services used in the scenes of television programs (Kitsukawa et al. 10:43-50). Thus, one of ordinary skill in the art would not have been motivated to make the combination suggested by the examiner because the references themselves do not suggest such a combination and the problems being addressed therein are not at all similar. For these reasons, the combination of Grossman and Kitsukawa references is not supported and the present rejections should be removed.

For at least the foregoing reasons, the claims are patentable over the references cited in the Office Action. If there are any additional fees due in connection with this communication, please charge our deposit account no. 19-3140.

Respectfully submitted,

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Dated: October 25, 2006

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APPENDIX A: Claims on Appeal

(37 C.F.R. § 41.37(c)(1)(viii))

The claims on appeal read as follows:

1. (Cancelled).

2. (Previously Presented) The method of claim 23, wherein downloading the selected data sets comprises storing the selected data sets in a buffer of a digital set top box.

3. (Previously Presented) The method of claim 2, wherein initiation of the first switching event comprises receiving at the digital set top box a signal from a television remote control device to switch channels.

4. (Cancelled)

5. (Previously Presented) The method of claim 23, wherein downloading the selected data sets comprises storing those of the selected data sets associated with the first information element in a buffer of a digital set top box and storing others of the selected data sets associated with others of the information elements in a memory of the digital set top box, wherein corresponding ones of the others of the selected data sets stored in the memory of the digital set top box replace those of the selected data sets in the buffer of the digital set top box once the first information element is displayed.

6. (Cancelled)

7. (Previously Presented) The method of claim 23, wherein the first information element comprises data associated with the data stream information from the server.

8. (Previously Presented) The method of claim 23, wherein the first information element comprises advertising data selected in accordance with the user profile information.

9 - 22. (Cancelled)

23. (Currently Amended) A method, comprising:

periodically downloading from a server selected data sets according to user profile information, the selected data sets representing information elements for display to a user during switching events;

displaying a first one of the information elements in response to initiation of a first switching event, the first switching event being characterized by unavailability of information from the server for display; and

discontinuing the display of the first one of the information elements and displaying the data stream information from the server when it becomes available for such display, unless the user has initiated an interactive transaction session with a remote host by selecting an interactive element associated with the first one of the information elements in which case displaying the data stream information from the server is delayed until termination of the interactive transaction session or expiration of a predetermined period of inactivity by the user.

24. (Previously Presented) The method of claim 23, wherein downloading the selected data sets comprises storing the selected data sets in a digital set top box in which the user profile information is stored.

25. (Previously Presented) The method of claim 23, wherein the user profile information is stored at the server.

26. (Previously Presented) The method of claim 23, wherein the user profile information is stored in a data source accessible by the server.

27. (Previously Presented) The method of claim 26, wherein the data stream information is also stored in the data source.

28. (Previously Presented) The method of claim 23, wherein the remote host comprises an Internet host and the interactive transaction session comprises an electronic shopping transaction.

29. (Previously Presented) The method of claim 23, wherein the user profile information is based on one or more of: the user's television viewing habits, the user's purchasing habits, and the user's use of one or more television services.

30. (Previously Presented) The method of claim 23, wherein the information elements comprise one or more of: advertisement, information regarding the data stream information, information regarding a television program, information regarding a television channel, personal information regarding the user, a segment of the data stream information, or local or regional information.

31. (Currently Amended) A system, comprising:

a server configured to provide a data stream transmission; and

a digital set top box configured to (i) periodically download from the server selected data sets according to user profile information, the selected data sets being included within the data stream and representing information elements for display to a user during switching events; (ii) display a first one of the information elements in response to initiation of a first switching event, the first switching event being

characterized by unavailability of information from the server for display; and (iii) discontinue the display of the first one of the information elements and displaying the data stream information from the server when it becomes available for such display, unless the user has initiated an interactive transaction session with a remote host by selecting an interactive element associated with the first one of the information elements in which case displaying the data stream information from the server is delayed until termination of the interactive transaction session or expiration of a predetermined period of inactivity by the user.

32. (Previously Presented) The system of claim 31, wherein the digital set top box includes both a buffer and a memory and is configured to store those of the selected data sets representing a first one of the information elements in the buffer and others of the selected data sets representing other information elements in the memory.

33. (Previously Presented) The system of claim 32, wherein the digital set top box is further configured to replace those of the selected data sets representing the first one of the information elements in the buffer with at least some of the others of the selected data sets representing other information elements in the memory after displaying the first information element.

34. (Previously Presented) The system of claim 31, wherein the digital set top box includes an interface configured to receive signals from a remote control unit, the signal representing initiation of the first switching event, which corresponds to changing channels.

35. (Previously Presented) The system of claim 31, wherein the information elements comprise one or more of: advertisement, information regarding the data stream information, information regarding a television program, information regarding a television channel, personal information regarding the user, a segment of the data stream information, or local or regional information.

36. (Previously Presented) The system of claim 31, wherein the digital set top box is further configured to store the user profile information.

37. (Previously Presented) The system of claim 31, wherein the server is further configured to store the user profile information.

38. (Previously Presented) The system of claim 31, further comprising a data store unit accessible by the server and configured to store the user profile information.

39. (Previously Presented) The system of claim 38, wherein the data store unit is further configured to store the data stream information.

APPENDIX B: Related Proceedings
(37 C.F.R. § 41.37(c)(1)(x))

This application was previously the subject of an appeal (Notice of Appeal filed Oct. 14, 2003), which was dismissed prior to decision as a result of issuance of an Office Action dated March 29, 2004. No Decision on Appeal was ever issued.

APPENDIX C: Other Evidence

(37 C.F.R. § 41.37(c)(1)(ix))

There is no evidence submitted under 37 CFR 1.130, 1.131 or 1.132, or other evidence entered by the examiner and relied upon by the appellant in this appeal.